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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/772,157	01/29/2001	Edward F. Tokas	IR-2588(ET)CIP	8701

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EXAMINER

KNABLE, GEOFFREY L

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/772,157

Applicant(s)

TOKAS ET AL.

Examiner

Geoffrey L. Knable

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33, 49 and 50 is/are pending in the application.
- 4a) Of the above claim(s) 6, 8, 21-33 and 49 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 9-20 and 50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10-15-02; 8-14-01; 7-19-01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

1. Applicant's election without traverse of Group I (claims 1-33, 49 and 50) and species A2 (catalyst as component of the fibrous substrate) in the replies filed on 12-12-2003 and 7-28-2004 is acknowledged.
2. Claims 6, 8, 21-33 and 49 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention/species, there being no allowable generic or linking claim. Election was made **without** traverse in the replies filed on 12-12-2003 and 7-28-2004.
3. It is noted that the application number of the parent application that is given in both the transmittal letter and the declaration, *and reflected on the filing receipt*, appears to be the wrong number – i.e. it appears it should be 09/209,706 (as correctly set forth at the first line of the specification). With respect to the requirements for correcting this after the applicable time periods (since this application was filed on or after November 29, 2000), applicant's attention is directed to MPEP 201.11 and esp. 201.11 (III)(F) and (V).
4. Claims 1-5, 7, 9-20 and 50 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, step (c) defines "contacting the fibrous substrate surface with a second substrate surface" – since however the fibrous substrate surface was apparently modified or covered in step (b), it is not clear if step (c) requires actual contact between the fibrous substrate surface and the second substrate or whether this is inclusive of contact with the metathesized material on the fiber.

Claim 50 refers to a "post vulcanized or cured elastomer" – it however is not clear what this "post" is relative to, i.e. it is not clear how this relates to the steps defined in claim 1.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-5, 10, 16-20 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 7-188636 to Nippon Zeon taken in view of EP 424833 to Goodall et al.

JP '636 discloses bonding a norbornene based resin member formed by metathesis polymerization to an adherend of "metal, rubber, plastic, or other member" (note English abstract). Further, this reference indicates that the molded norbornene based resin member may include fillers and reinforcing materials (e.g. note paragraph

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[0029] of supplied machine translation). Although not specifically described, the artisan would have understood that this would have been inclusive of the extremely well known use of fiber reinforcement in bulk molded norbornene based molded articles – EP '833 provides evidence in support of this well known expedient – note esp. page 2, lines 17-29. As such, JP '636 is considered to have rendered obvious bonding metathesis formed norbornene based products that include fibrous reinforcement to a “second substrate”. JP '636 however does not suggest providing catalyst at the fibrous substrate surface as claimed. EP '833 is also directed to forming reinforced norbornene based products by metathesis polymerization and in particular suggests providing the catalyst at the fibrous substrate rather than supplying the catalyst with the metathesizable material, this avoiding the need for catalyst mixing – e.g. page 3, lines 1+. To form the molded reinforced norbornene based material of JP '636 by applying the catalyst on the fibrous reinforcement would thus have been obvious and lead to expected processing advantages. Such fully satisfies the claim 1 requirements. As to claim 2, the conventional fibrous reinforcement for molded norbornene products include materials as claimed – note EP '833, page 2, lines 17-29 and page 3, lines 9+. As to claims 3-5, as already noted, JP '636 suggests that it is well known to bond molded norbornene products to rubber, the claimed rubbers being extremely well known, typical and obvious rubbers that are commonly used in a wide variety of products. As to claim 10, note paragraph [0025] of the machine translation of JP '636. As to claims 16-20, note esp. paragraph [0022] of JP '636. As to claim 50, as already noted, a second substrate of rubber is suggested by JP '636, it not being considered at present that the

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claimed reference to a "cord" necessarily and unambiguously defines over the conventional forms of fiber reinforcement exemplified for example by EP '833 – note for example that the claim does not provide any clear indication or limits on what is meant by "cord" (e.g. there is no indication that this is for example a tire cord which would provide more clear limits on what is meant by this).

8. Claims 1-5, 7, 10, 16-20 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (US 5,137,785) taken in view of EP 424833 to Goodall et al.

Suzuki et al. discloses bonding a norbornene based resin substrate member formed by metathesis polymerization to surface layers of an olefin polymer or thermoplastic elastomer (e.g. note col. 2, lines 9+). Further, this reference indicates that the molded norbornene based resin member may include fillers and reinforcing materials (e.g. note col. 6, lines 39-49). Although not specifically described, the artisan would have understood that this would have been inclusive of the extremely well known use of fiber reinforcement in bulk molded norbornene based molded articles – EP '833 provides evidence in support of this well known expedient – note esp. page 2, lines 17-29. As such, Suzuki et al. is considered to have rendered obvious bonding metathesis formed norbornene based products that include fibrous reinforcement to a "second substrate". Suzuki et al. however does not suggest providing catalyst at the fibrous substrate surface as claimed. EP '833 is also directed to forming reinforced norbornene based products by metathesis polymerization and in particular suggests providing the catalyst at the fibrous substrate rather than supplying the catalyst with the

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metathesizable material, this avoiding the need for catalyst mixing – e.g. page 3, lines 1+. To form the molded reinforced norbornene based material of Suzuki et al. by applying the catalyst on the fibrous reinforcement would thus have been obvious and lead to expected processing advantages. Such fully satisfies the claim 1 requirements. As to claim 2, the conventional fibrous reinforcement for molded norbornene products include materials as claimed – note EP '833, page 2, lines 17-29 and page 3, lines 9+. As to claims 3-5, the surface layers in Suzuki can be thermoplastic elastomer or olefin polymers including EPDM (e.g. col. 4). As to claim 7, Suzuki discloses bonding the fibrous reinforced norbornene based material between two surface layers in a mold (e.g. col. 6, lines 21+). As to claim 10, note col. 3, lines 53+ of Suzuki et al. As to claims 16-20, note esp. col. 3 of Suzuki et al. As to claim 50, as already noted, a second substrate of elastomer or EPDM rubber is suggested by Suzuki et al., it not being considered at present that the claimed reference to a “cord” necessarily and unambiguously defines over the conventional forms of fiber reinforcement exemplified for example by EP '833 – note for example that the claim does not provide any clear indication or limits or context on what is meant by “cord” (e.g. there is no indication that this is for example a tire cord which would provide more clear limits on what is meant by this).

9. Claims 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over [JP 7-188636 to Nippon Zeon taken in view of EP 424833 to Goodall et al.] or [Suzuki et al. (US 5,137,785) taken in view of EP 424833 to Goodall et al.] as applied above, and further in view of the admitted state of the prior art.

As to claims 11-15, the primary references are not considered to be particularly limited in terms of the metthesis catalysts used in the polymerization, it being considered to have been obvious to select any of the known suitable and effective metathesis catalysts. In light of page 15, line 13 to page 25, lines 30 of the specification, it is considered to be admitted that the catalysts of the claimed type are known per se as metathesis catalysts, it therefore being considered to have been obvious to utilize such known catalysts to form the desired metathesized material desired by the primary references for only the expected results.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Benedikt et al. (US 4,902,556) discloses bonding fiber reinforced norbornene polymers to reinforced epoxy and/or metal layers but is no more relevant at present than the applied prior art. Endo et al. (US 5,096,644) discusses making fiber reinforced articles by metathesis polymerization but is less relevant than the applied prior art.

11. Claim 9 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.


Although applying catalyst to a fibrous substrate surface is suggested by EP '833 as described above, there is no teaching or suggestion of providing a process as claimed in which the catalyst is included as a component of the fibrous substrate (this being read consistent with the original disclosure as excluding application of the catalyst to the fibrous substrate surface).

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on 571-272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Geoffrey L. Knable
Primary Examiner
Art Unit 1733

G. Knable
October 17, 2004